

AMENDMENTS TO THE SPECIFICATION

Please replace paragraphs [0001] and [0048] with the following:

[0001] This application is a continuation-in-part application of U.S. Patent Application No. 10/407,004 entitled "Planar Membrane Deoxygenator" filed on April 4, 2003, now U.S. Patent No. 6,709,492, issued March 23, 2004, the content of which is incorporated herein in its entirety.

[0048] The high temperature heat source 22 may further comprise a cooled turbine cooling air unit 80, as is shown with reference to FIG. 9. The cooled turbine cooling air unit 80, including heat exchanger 82, effects the heat transfer between the deoxygenated fuel from the FSU 16 and the engine 14 by receiving an air stream at a temperature of about 1,200 degrees F from the compressor 30 of the engine 14 and the deoxygenated fuel stream from the FSU 16. Heat is transferred between the received air stream and the fuel stream, thus heating the deoxygenated fuel and cooling the air. The heated fuel is directed to the combustor 32, and the cooled air is directed to a compressor 39. The outlet stream from the compressor 39 is split into three streams and directed back to the compressor 30, the combustor 32, and the turbine 34. The temperature of the heated fuel is greater than the coking limit of about 325 degrees F and less than the temperature at which pyrolysis occurs (about 900 degrees F). In particular, the temperature of the heated fuel is preferably about 700 degrees F to about 800 degrees F. Upon directing the cooled air to the turbine 34, a buffer layer of cool air is received at the surfaces of the turbine, thereby allowing the combustion gases received from the combustor 32 to be of higher temperatures.